

Online Orchestra

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Guest Editorial

Online Orchestra was an Arts & Humanities Research Council-funded project, run by Falmouth University from October 2014 to March 2016, in collaboration with the University of Bristol, the Philharmonia Orchestra and the Cornwall Music Education Hub. It involved an interdisciplinary team of 55 research and support staff, and a further 60 young and amateur musicians.

Online Orchestra asked how we can use burgeoning network technologies and creative approaches to composition to give people in remote communities access to large-scale ensemble music-making. Eight working groups during the design phase of the project led to the development of new software that controls network latency, new compositional methods designed for an online environment and new approaches to system design for telematic performance. The project culminated in a pilot performance in July 2015 involving musicians across Cornwall, United Kingdom, performing together over the Internet: a conductor at Falmouth University led an orchestra consisting of flutes on the Isles of Scilly, brass in Mullion (on the Lizard Peninsula), and strings, choir and soloists in Truro Cathedral. Musicians performed three new works, commissioned specifically for the project: *In Sea-Cold Lyonesse* by John Pickard, *Re-Tracing* by Jim Aitchison and *Spiritus Telecommunitas* by Federico Reuben. A video of the performance, along with several documentary films, can be found at www.onlineorchestra.com.

This special edition of the *Journal of Music, Technology and Education* sets out detailed findings from the Online Orchestra project through a range of articles written by various members of the research team. In the first article, the contexts in which Online Orchestra worked are outlined, including a short description of precedent projects, and an analysis of the potential benefits telematic performance might enable in remote educational and community environments. This leads to a summary of the project's overall starting premises and findings. Articles two, three, four and five present technological findings from the project. In 'Telematic performance and the challenge of latency', the issue of time delay when performing online is outlined, and details of the method adopted by Online Orchestra to overcome this challenge are described. The third and fourth articles report in detail the system design used in Online Orchestra, and the rationale for decision-making, focusing on computing hardware and software and then moving on to peripheral equipment. The fifth article offers a detailed analysis of one aspect of the audio system, giving a snapshot of the many variables that come to bear on telematic performance. Articles six, seven and eight offer musical perspectives on the project from composers, participant performers and the conductor: 'Composing for a latency-rich environment' brings together interviews with the three composers commissioned by the project with detailed analyses of their work; 'Experiencing Online Orchestra' presents post-project interviews with four participants in the pilot performance; 'Notes from the podium of an Online Orchestra' offers a first-hand account by the project's conductor on the experience of rehearsing and directing online. Finally, 'The network as niche' considers the ways in which telematic music systems mediate the music made with them through the lens of Gibson's theory of affordances.

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